

Translated English of Chinese Standard: GB/T12363-2021  
[www.ChineseStandard.net](http://www.ChineseStandard.net) → Buy True-PDF → Auto-delivery.  
[Sales@ChineseStandard.net](mailto:Sales@ChineseStandard.net)

**GB**

NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

ICS 77.140.85

CCS J 32

**GB/T 12363-2021**

Replacing GB/T 12363-2005

---

## **Classification of Forging Functions**

锻件功能分类

**Issued on: May 21, 2021**

**Implemented on: December 01, 2021**

---

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

---

## Table of Contents

|                                                                                              |   |
|----------------------------------------------------------------------------------------------|---|
| Foreword.....                                                                                | 3 |
| 1 Scope.....                                                                                 | 5 |
| 2 Normative References .....                                                                 | 5 |
| 3 Terms and Definitions .....                                                                | 6 |
| 4 Basic Requirements for Classification of Forging Functions .....                           | 6 |
| 5 Methods for Classification of Forging Functions .....                                      | 6 |
| 6 Technical Conditions, Process Requirements and Acceptance Basis for Various Forgings ..... | 7 |

# Classification of Forging Functions

## 1 Scope

This Document specifies the basic requirements and methods for the classification of forging functions, as well as the technical conditions, process requirements and acceptance basis for various forgings.

This Document is applicable to metal free forgings, die forgings and special forgings.

## 2 Normative References

The following documents are essential to the application of this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 8541 Terminology of Forging and Stamping

GB/T 8545 Die Forgings of Aluminium and Aluminium Alloy - Dimensional Tolerance and Machining Allowance

GB/T 12361 General Specification of Steel Die Forgings

GB/T 12362 Steel Die Forgings – Tolerance and Machining Allowance

GB/T 25137 Titanium and Titanium Alloy Forgings

GB/T 26639 General Specifications for Open Die Forgings on Hydraulic Press

GB/T 29532 General Specification for Steel Precision Hot Die Forgings

GB/T 32249 Aluminium and Aluminium-Alloy Die Forgings, Hand Forgings and Rolled Ring Forgings - General Specification

GB/T 32258 Steel Cross Wedge Rollings - General Specification

GB/T 33212 Steel Open Die Forgings on Hammer - General Specifications

The part that is used to withstand a fixed load, but are not subject to shock and vibration working conditions. Damage to such parts shall only cause partial failure of the product.

#### **5.2.4 Class-IV forgings**

The part that is used to withstand low load, low strength requirement and high safety factor; and other forgings other than the above three categories.

## **6 Technical Conditions, Process Requirements and Acceptance Basis for Various Forgings**

### **6.1 Technical conditions**

The classification of forgings can be related to the advance planning of forgings, the failure mode of forgings and the input and control that influence the analysis.

After the classification of forgings, different categories of forgings shall be treated differently in terms of technical process requirements, quality control, and production management.

### **6.2 Process requirements**

**6.2.1** Various forgings shall be prepared the corresponding process specifications and forging processes during the design of the forging process against the different forgings in the fields of with low or no oxidation heating, heating temperature control and sorting, metal deformation process methods, consistency of the forging process, reasonable selection of equipment, and final forging temperature control, etc.; meanwhile it shall comply with the provisions of GB/T 8545, GB/T 12361, GB/T 12362, GB/T 25137, GB/T 26639, GB/T 29532, GB/T 32249, GB/T 32258, GB /T 33212, etc.

**6.2.2** The heating of various forgings blanks shall be equipped with separation devices for the qualified, over-temperature, and under-temperature process; and over-burned parts shall be rejected as waste. Among them, the number of repeated heating for Class-I and Class-II forgings shall not exceed twice.

**6.2.3** Class-I and Class-II forgings shall have traceability marks, which shall be incorporated into security parts and important parts for management and control. Raw material suppliers shall conduct supplier management. Products shall be verified when developing new suppliers to ensure the stable and reliable quality of the materials. The changes in forging production line and process shall be verified and approved; and the inspection items involving intrinsic quality shall be randomly checked for no less than 1 piece per batch. The process and inspection records shall be kept for at least three years. When the purchaser has special requirements, the quality records shall be kept for the period that shall meet requirements of the contract between the supplier and

**This is an excerpt of the PDF (Some pages are marked off intentionally)**

**Full-copy PDF can be purchased from 1 of 2 websites:**

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, [Sales@ChineseStandard.net](mailto:Sales@ChineseStandard.net)

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

**----- The End -----**