



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

GB/T 34484.2-2018

**Heat-treatable steels -- Part 2: Alloy steels for quenching and
tempering**

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Foreword

GB/T 34484 "Heat-treatable steel" is divided into two parts.

- Part 1.Non-alloy steel;
- Part 2.Alloy steels for quenching and tempering.

This Part is Part 2 of GB/T 34484.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part uses the redrafting method, to modify and adopt ISO 683-2:2016 "Heat-treatable steels, alloy steels and free-cutting steels - Part 2. Alloy steels for quenching and tempering".

Compared with ISO 683-2:2016, this Part has structural adjustments. Appendix A lists the comparison of chapter and article numbers between this Part and ISO 683-2:2016. There are technical differences between this Part and ISO 683-2:2016. The clauses involved in these differences have been marked by a vertical single line (?) in the outer margin position. Appendix B gives a list of corresponding technical differences and their reasons.

For ease of use, this Part has made the following editorial changes.

- CHANGE the standard name from "Heat-treatable steels, alloy steels and free-cutting steels - Part 2. Alloy steels for quenching and tempering" to "Heat-treatable steels - Part 2. Alloy steels for quenching and tempering";
- DELETE the informative Appendix D and references in ISO 683-2:2016.

This Part was proposed by the China Iron and Steel Association.

This Part shall be under the jurisdiction of the National Technical Committee for Steel Standardization (SAC/TC 183).

Drafting organizations of this Part: Daye Special Steel Co., Ltd., Metallurgical Industry Information Standards Research Institute, Jiangyin Xingcheng Special Steel Co., Ltd., Xiwang Special Steel Co., Ltd.

1 Scope

This Part of GB/T 34484 specifies the ordering content, size, shape, weight, technical requirements, test methods, inspection rules, packaging, marking, quality certificate of alloy steels delivered in quenched and tempered state.

This Part applies to rolled round steel which has a nominal diameter not exceeding 310 mm and rolled square steel which has a nominal side length not exceeding 280 mm (hereinafter referred to as steel).

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 standard.

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

GB/T 223.9 Iron, steel and alloy - Determination of aluminium content - Chrome azurol S photometric method

GB/T 223.11 Iron, steel and alloy - Determination of chromium content - Visual titration or potentiometric titration method (GB/T 223.11-2008, ISO 4937.1986, MOD)

GB/T 223.13 Methods for chemical analysis of iron, steel and alloy - The ammonium ferrous sulfate titration method for the determination of vanadium content

GB/T 223.17 Methods for chemical analysis of iron, steel and alloy - The diantipyryl methane spectrophotometry for the determination of titanium content

GB/T 223.23 Iron, steel and alloy - Determination of nickel content - The dimethylglyoxime spectrophotometric method

GB/T 223.26 Iron, steel and alloy - Determination of molybdenum content - The thiocyanate spectrophotometric method

GB/T 6394 Determination of estimating the average grain size of metal

GB/T 10561-2005 Steel - Determination of content of nonmetallic inclusions - Micrographic method using standards diagrams (ISO 4967.1998, IDT)

GB/T 17505 Steel and steel products - General technical delivery requirements (GB/T 17505-2016, ISO 404.2013, MOD)

GB/T 20066 Steel and iron - Sampling and preparation of samples for the determination of chemical composition (GB/T 20066-2006, ISO 14284.1996, IDT)

GB/T 20123 Steel and iron - Determination of total carbon and sulfur content

Infrared absorption method after combustion in an induction furnace (routine method)

3 Ordering content

The contract or order for ordering according to this Part shall include the following content.

- a) This Part number;
- b) Product name;
- c) Designation;
- d) Smelting method (see 5.2);
- e) Surface hardness (see 5.4);
- f) Grain size (see 5.7);
- g) Ultrasonic testing (see 5.8);
- h) Remanence (see 5.9);
- i) Weight (or quantity);
- j) Dimensions and shape (see Chapter 4);
- k) Special requirements.

4.1 The dimensions and allowable deviations of steel shall comply with the provisions

of Group 2 in GB/T702-2017.

7.1.1 Inspection and acceptance of steel products before leaving factory shall be conducted by the supplier's quality department.

7.1.2 The supplier shall ensure that the delivered steel products comply with the provisions of this Part or the contract. If necessary, the purchaser shall have the right to inspect and accept any inspection item specified in this Part or the contract.

7.2 Group-batching rules

Steel products shall be inspected and accepted in batches. Each batch shall consist of steel products of the same designation, furnace number, size, heat treatment system