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

GB/T 2516-2023

Replacing GB/T 2516-2003

General purpose metric screw threads - Limit deviations

普通螺纹 极限偏差

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

GB/T 2516 "Limit Deviation of Ordinary Threads" and GB/T 192 "Basic Tooth Forms of Ordinary Threads", GB/T 193 "Ordinary Thread Straightness" Diameter and pitch series", GB/T 196 "Basic dimensions of ordinary threads", GB/T 197 "Tolerances of ordinary threads", GB/T 9144 "Ordinary threads Thread Selected Series", GB/T 9145 "Common Thread Medium Precision, Ultimate Dimensions of Selected Series" and GB/T 15756 "Common Thread "Extreme Size" together constitute the "Common Thread" national standard system:

This document replaces GB/T 2516-2003 "Limit Deviation of Ordinary Threads": Compared with GB/T 2516-2003, except for structural adjustments and in addition to editorial changes, the main technical changes are as follows:

- a) Four external thread tolerance zones (4g, 5g4g, 8e and 9e8e) have been added (see Table 1);
- b) The basic deviation of the small diameter of external threads used for stress calculation is deleted (see Table 1 and Chapter 4 of the:2003 edition):

This document is modified to adopt ISO 965-3:2021 "ISO Metric Ordinary Thread Tolerances Part 3: Thread Limit Deviation":

Compared with ISO 965-3:2021, this document has made the following structural adjustments:

--- Paragraph 1 of Chapter 1 corresponds to Paragraph 1 and Paragraph 2 of Chapter 1 in ISO 965-3:2021:

The technical differences between this document and ISO 965-3:2021 and their reasons are as follows:

---Replaced ISO 5408 (see Chapter 3) with the normatively cited GB/T 14791, and the degree of consistency between the two documents is equal in order to adapt to my country's technical conditions and increase operability;

---Change the prompt in Table 1 from statement clauses to requirement clauses (see Chapter 4) and clarify its requirement attributes:

The following editorial changes have been made to this document:

---In order to coordinate with existing standards, the name of the document is changed to "Limit Deviation of Ordinary Threads";

---Replaced ISO 68-1, GB/T 193 replaced ISO 261, and GB/T 197 with the informative reference GB/T 192 ISO 965-1 (see Chapter 1);

---Deleted the "Note" content in Chapter 4:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the limit deviations of the pitch diameter and top diameter of ordinary threads (M): The basic tooth form and diameter and pitch series of ordinary threads are respectively Comply with the provisions of GB/T 192 and GB/T 193, and the basic deviations and tolerances comply with the provisions of GB/T 197:

This document applies to ordinary threads using the recommended tolerance zone:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 14791 Thread terminology (GB/T 14791-2013, ISO 5408:2009, IDT)

3 Terms and definitions

The terms and definitions defined in GB/T 14791 apply to this document:

4 Limit deviation

The limit deviation values of pitch diameter and top diameter of ordinary threads should comply with the provisions of Table 1:

Any point on the actual tooth bottom contour of the internal and external threads should not exceed the maximum physical tooth form determined by the basic tooth form and basic deviation:

If there are no special instructions for coated threads, the tolerance zone applies to the threads before coating: After coating, no point on the actual thread profile should exceed the maximum solid tooth form determined by the tolerance zone position H or h: