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

GB/T 45612-2025

1 100 MPa spline-drive bolts with MJ threads for aerospace

航空航天用1100MPa MJ螺纹花键头螺栓

(English Translation)

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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 9254:1993 "Aerospace strength grade less than or equal to 1100MPa, with or without coating, metal Dimensions of ordinary spline head bolts with standard diameter or mid-diameter shank and long MJ thread made of metal materials.

A new chapter "Terms and Definitions" has been added to this document.

The technical differences between this document and ISO 9254:1993 and their reasons are as follows.

- Increased the surface roughness of the bolt (see Figure 1). Roughness is a necessary basis for bolt manufacturing. Increasing the surface roughness can make the bolt Provide good guidance for bolt manufacturing;
 - Replace ISO 286-2:1988 (see Table 1) with the normative reference GB/T 1800.2-2020 to adapt to my country's technical conditions and improve Provide operability;
 - Use the normative reference GB/T 43924.2-2024 to replace ISO 5855-2:1999 (see Table 1) to adapt to my country's technical conditions, Provides operability;
 - Replace ISO 3353 with ISO 3353-1 (see Table 1), involving only normative references in Part 1;
 - The rod diameter corresponding to the middle diameter rod (see Table 1) has been deleted to better meet the actual domestic usage;
 - Increased the tolerance of the size of the fuse hole position P on the head (see Table 1), which can better guide the bolt manufacturing;
 - Added a bolt length table (see Table 2) to better guide bolt manufacturing and selection.
- The following editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "1100MPa spline head MJ threaded bolts for aerospace use";

--- Changed some dimension marking symbols of bolts (see Figure 1 and Table 1) to be more in line with the domestic practice of dimension marking of fasteners.

1 Scope

This document specifies the structural and dimensional requirements for 1100MPa spline head MJ threaded bolts (hereinafter referred to as "bolts") for aerospace use.

This document applies to the design, production and use of 1100MPa spline head MJ threaded bolts for aerospace applications.

2 Normative references

The contents of the following documents constitute 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 1800.2-2020 Geometrical Product Specifications (GPS) Linear Dimension Tolerances ISO Code System Part 2: Standards Tolerance zone codes and limit deviation tables for holes and shafts (ISO 286-2:2010, MOD)

GB/T 43924.2-2024 Aerospace MJ threads Part 2: Bolts and nuts (ISO 5855-2:1999, MOD)

ISO 3353-1 Aerospace Lead and runout threads Part 1: Rolled external threads

ISO 7403 Aerospace-Splinedrives-Wrenching

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Requirements

The structure and size of the bolts shall comply with the requirements of Figure 1, Table 1 and Table 2.

Dimensions and tolerances apply to surfaces after coating and before lubrication.