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

GB/T 43924.1-2024

Aerospace - MJ threads - Part 1: General requirements

航空航天 MJ螺纹 第1部分：通用要求

(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 part 1 of GB/T 43924 Aerospace MJ Thread: GB/T 43924 has been published in the following parts:

- Part 1: General requirements;
- Part 2: Limit dimensions of bolt and nut threads;
- Part 3: Limit dimensions of threads for fluid system piping components:

This document is modified to adopt ISO 5855-1:1999 "Aerospace MJ threads - Part 1: General requirements":

The technical differences between this document and ISO 5855-1:1999 and their reasons are as follows:

- Replaced ISO 965-1:1998 with the normative reference GB/T 197 (see 6.1, 6:3, 10:1 and 10:2):

The degree of consistency is modified to adapt to my country's technical conditions and

increase operability:

The following editorial changes were made to this document:

---Change 0:42535 in Table 1 to 0:42435, and calculate according to the coefficients in the table: $0:56580P=0:56580 \times 0:75=0:42435$, ISO 5855-1:1999 calculation result is wrong;

---Change $d_{\max}=d-es$ in 10:1 to $d_{\max}=d+es$, es is the upper deviation of the external thread diameter, thread accuracy e, f, g, h when $es \leq 0$, $d_{\max}=d+es$, the formula of ISO 5855-1:1999 is incorrect;

---Added references:

Introduction

GB/T 43924 "Aerospace MJ Thread" is intended to consist of three parts:

--- Part 1: General requirements: The purpose is to specify the thread type and its dimensions, tolerances, markings, calculation specifications of MJ threads for aerospace applications:

Formula, etc:

--- Part 2: Limit dimensions of bolt and nut threads: The purpose is to specify the limits of bolts with a nominal diameter of 1.6 mm to 39 mm:

And the MJ thread limit size of the nut:

--- Part 3: Limit sizes of threads for fluid system pipe fittings: The purpose is to specify the MJ for aerospace fluid system pipe fittings:

Limiting thread size:

In the design of aviation and spacecraft, in order to reduce the volume and make the parts structure as compact as possible, and to withstand the impact force environment, Therefore, the threads used in structural connections have high fatigue strength and long fatigue life:

The root radius of the thread and the flattening amount of the inner thread minor diameter, the outer thread root is an arc transition, which meets the requirements of impact load and high fatigue:

It has been widely used in the aerospace field: This document improves the standards for basic fasteners of my country's aerospace products:

Aerospace MJ Thread

Part 1: General requirements

1 Scope

This document specifies the general requirements for MJ threads used in aerospace products:

This document specifies the basic tooth profile of MJ thread and gives the diameter and pitch combination series:

300mm thread, this document provides the basic dimensions and tolerances of diameter and pitch in table form:

This document provides methods for calculating dimensions and tolerances for threads with numerical pitch values, including threads with diameters exceeding 300 mm:

For the limit sizes of bolts and nuts with nominal diameters of 1.6 mm to 39 mm, see GB/T 43924.2-2024:

For the limit sizes of grooves, see GB/T 43924.3-2024:

2 Normative references

The contents of the following documents constitute the 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 197 General thread tolerances (GB/T 197-2018, ISO 965-1:2013, MOD)

3 Terms and definitions

The following terms and definitions apply to this document:

Basic profile

The theoretical tooth profile, in the axial plane, corresponds to the basic dimensions of the thread (excluding tolerances), namely the major diameter, the middle diameter and the minor diameter:

see picture 1:

4 Basic tooth types

4.1

Code

see picture 1:

4.2

Dimensions

The basic tooth profile dimensions are shown in Figure 1 and Table 1:

The basic deviation should match the basic size: