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

GB/T 41508-2022

**Additive manufacturing - General principles - Requirements for
purchased AM parts**

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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 of Standardization Documents" drafted.

This document is revised and adopted ISO /ASTM52901.2017 "Additive Manufacturing General Principles of Additive Manufacturing Parts Purchasing Requirements".

The technical differences between this document and ISO /ASTM52901.2017 and their reasons are as follows.

---Add the relevant content of terms and definitions, replace ISO /ASTM52900 with GB/T 35351 (see Chapter 3), to continue to use

The customary way of defining terms in the field of additive manufacturing in China is convenient for standard users to use Chinese terms;

--- Added testing items and testing methods for parts performance, replacing ISO 17296-3 and ASTM F3122 with GB/T 35022

(see 4.3.1, 4.4.2), in order to fully consider the status quo of my country's additive manufacturing technology and meet the current development of my country's additive manufacturing technology

Require.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

This document specifies the definition and communication of additive manufacturing requirements for purchased parts. The aim is to bring additive manufacturing between

customers and parts suppliers

Ability to communicate effectively and clearly to ensure parts meet customer requirements.

This document is intended for use by additive manufacturing part suppliers and/or

or customer use.

This document is the top-level standard in the additive manufacturing standard system, as it applies to any additive manufacturing process and any material type zero

pieces. This document allows for different requirements depending on the criticality of the additively manufactured part and the classification of the intended end use.

Additive Manufacturing General Rules Additive Manufacturing Parts Purchasing Requirements

1 Scope

This document specifies the procurement requirements for additively manufactured parts.

This document establishes guidelines for customers and parts suppliers in the parts procurement process, including customer order information, part definition numbers

data, raw material requirements, part performance and function, inspection requirements and part acceptance methods.

This document applies to parts manufactured using additive manufacturing techniques that meet the minimum acceptance requirements. When ordering, add a

one or more supplementary requirements to meet more stringent customer requirements.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document.

GB/T 35022 Additive Manufacturing Main Characteristics and Test Methods Parts and Powder Raw Materials

GB/T 35351 Additive Manufacturing Terminology

GB/T 41507 Additive Manufacturing Terminology Coordinate System and Test Methods (GB/T 41507-2022, ISO /ASTM52921.

2013, MOD)

3 Terms and Definitions

GB/T 35351 as well as the following terms and definitions apply to this document.

3.1

Factory inspection pre-shipment inspection

Before delivery, inspect the supplied parts or test specimens according to the part's specification to confirm compliance with the parts

order requirements.

3.2

qualification part

Parts manufactured before the official production of product parts can be put into official production after the qualification is qualified.

NOTE. Is used to define specific aspects of the manufacturing process or part characteristics.

3.3

first production part

Parts with the same geometry (and the same tolerances), the same materials, and the same features as the product requested for the order are used for inspection

Verify that the production process has the corresponding manufacturing capacity.

3.4

reference part

A part that is similar to the final part, but has a different geometry, size, or feature that is easily measured or characterized.

NOTE. Reference parts are usually anatomical parts with simple geometry to verify part properties and reduce measurement effort.

3.5

Acceptance acceptance

An agreement between a customer and a parts supplier for the delivery of parts that meet the requirements of a purchase order.