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

GB/T 46153-2025

**3D printing equipment for casting sand mould - Testing of the
accuracy**

铸造砂型3D打印设备 精度检验

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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.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

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Precision inspection of casting sand mold 3D printing equipment

1 Scope

This document specifies the inspection environment conditions for casting sand mold 3D printing equipment, and describes the equipment accuracy inspection methods and inkjet accuracy inspection methods.

The law stipulates the content of the inspection report.

This document applies to the accuracy inspection of binder-jet casting sand mold 3D printing equipment.

2 Normative references

GB/T 14896.7

GB/T 17421.2

GB/T 35351

GB/T 42156-2023

3 Terms and Definitions

The terms and definitions defined in GB/T 14896.7 and GB/T 35351, as well as the following terms and definitions, apply to this document.

3.1 printhead

Components that selectively spray adhesive.

Note. A set of nozzles contains multiple nozzle holes (3.2).

3.2 Nozzle

The porous structure of the sprayed adhesive.

3.3 testpaper

A type of thermal paper used to display printed images.

Note. Used to inspect the working condition of the printhead of an adhesive jet printer.

3.4 testimage

Standard images are designed to visually inspect printhead installation, operating status, and other aspects.

3.5 printhead

During the 3D printing process, the adhesive is sprayed onto the parts according to the model slice image and process requirements as needed and in the required amount.

Note. The printhead consists of one or more sets of printheads (3.1).

[Source. GB/T 42156-2023, 3.3, with modifications]