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GB/T 41507-2022

Additive manufacturing - Terminology - Coordinate systems and test methodologies

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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 modified using ISO /ASTM52921.2013 "Additive Manufacturing Standard Terminology Coordinate System and Test Methods".

Compared with ISO /ASTM52921.2013, this document has many adjustments in structure, and the structure number changes between the two documents are compared

See Appendix A for a list.

Compared with ISO /ASTM52921.2013, there are many technical differences in this document, in the outer margin of the clauses involved

Marked with a vertical single line (|). See Appendix B for a list of these technical differences and their reasons.

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

1 Scope

This document defines the terms and definitions involved in additive manufacturing technology, as well as the related abbreviations of additive manufacturing coordinate systems and test methods.

Abbreviation.

This document is intended for additive manufacturing users, producers, researchers, educators, publishers/media, and others, and can be used for additive manufacturing

Reports of test results for parts produced by the manufacturing system. The term includes a

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coordinate system for the position and orientation of the machine/system and the parts it contains

Definition, the purpose is to be compatible with GB/T 19660 where possible, and to clarify the adaptability of these principles in additive manufacturing.

Note 1.This document does not address the evaluation of suitability for surface cladding.

Note 2.This document does not deal with non-Cartesian systems.

This document does not contain the handling of all security issues. Users of this document are responsible for establishing appropriate safety and health measures prior to use,

and determine the applicability of its limitations.

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2 Normative references

There are no normative references in this document.

3.1 Additive Manufacturing Equipment and Coordinate System

3.1.1

buildplatform

A platform that provides a working surface at the beginning of forming and supports the forming process (see C.1 in Appendix C).

NOTE. In some systems, the part or object is attached to the forming platform directly or through a support structure during the manufacturing process. In some other systems, such as powder bed systems

system, not required.

[Source. GB/T 35351-2017, 2.3.4]

3.1.2

buildsurface

A flat area of superimposed material, usually the latest deposited layer, that serves as the basis for the formation of the next layer.

Note 1.For the first layer, the forming surface is usually the forming platform.

Note 2.In the directional energy deposition process, the forming surface can be an existing part or a real object, and on this basis, the material accumulation is formed.

Note 3.If the material deposition or curing direction is changed (or both change), can be defined relative to the forming surface.

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[Source. GB/T 35351-2017, 2.3.7]

3.1.3

front

The side of the operator interface and/or main viewing window on the device that the operator faces.

Note. Unless otherwise specified by the equipment manufacturer, usually refers to the front of the equipment (see C.1).

[Source. GB/T 35351-2017, 2.3.16]

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