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**NATIONAL STANDARD OF THE
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Additive manufacturing -- File format

增材制造 文件格式

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method identical with ISO/ASTM52915:2016 "Additive Manufacturing File Format (AMF) version 1.2".

This standard made the following editorial changes.

--- In line with the standard series, the standard name changed to "add material manufacturing file format." this standard is proposed by the China Machinery Industry Federation.

This standard by the National Standardization Technical Committee (SAC/TC562) centralized.

This standard was drafted unit. Anhui Rio Tinto additive Manufacturing Technology Co., Ltd., Beijing-speed Pu Rui Technology Co., Ltd., Northwest Industrial University School, Machine Productivity Promotion Center, Xi'an Jiaotong University, Huazhong University of Science and Technology, Nanjing Normal University.

1 Scope

This standard specifies the additive manufacturing file format (AMF) and provides an interactive format for additive manufacturing technology.

Meet the requirements of this standard, allowing AMF pretreatment, display and transmission. When preprocessing uses a structured electronic format Standards-compliant interoperability requires strict adherence to the Extensible Language (XML) architecture [1].

The W3C XML Structure Definition (XSD) for AMF can be found on the ISO website (<http://standards.iso.org/iso/Record A>).

As you can see, this standard does not include all the features associated with the part. See Appendix B for some of the features that may be covered in the future.

In order to ensure the integrity of the data, to achieve electronic signature and encryption, this standard does not list the applicable specific mechanical equipment.

2 Terms and definitions

The following terms and definitions apply to this document.

AMF user AMFconsumer Read (parse) AMF files for processing, visualization or analysis software.

Note: The .AMF file is imported by additive manufacturing equipment and includes viewing, analyzing and verifying software.

AMF editor AMFeditor Software for reading and overwriting AMF files and converting them.

Note: The AMF editor is used to convert AMF from one format to another, for example, to convert all surface triangles to flat triangles, or to multiply Hole material specification is converted into a mesh surface.

AMF generator AMFproducer Software to write (generate) AMF files to raw geometry data.

Note: AMF files are usually exported directly by CAD software, scanning software, or by algorithms.

Attribute

The characteristics of data that represent one or more data types or descriptions within an element.

Note In the XML framework, attributes are the characteristics of elements.

Comments

Correlates with Additive Manufacturing Document data and is entered as a literal element that software ignores.

Note: Comments are used to enhance the readability of files and can be used for debugging.

Element

XML document in the starting label, the contents of the end of the tag and any attribute information unit.