Progress in Additive Manufacturing
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SHORT COMMUNICATION

Standardisation efforts of ISO/TC 261 "Additive Manufacturing": 17th plenary meeting of ISO/TC 261 "Additive Manufacturing"

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Abstract
The main objective of ISO/TC 261 is to standardise the processes of additive manufacturing, the process chains (data, materials, processes, hard- and software, applications), test procedures, quality parameters, supply agreements, environment, health and safety, fundamentals and vocabularies. This section provides readers with news regarding standardisation efforts of ISO/TC 261.

Keywords Standardisation · Standards · Additive manufacturing · Disclaimer

International Organisation for Standardisation [1] 17th Plenary Meeting of ISO/TC 261 "Additive Manufacturing" held on 21 May 2021, Online

1 Establishment of new joint groups

Establishment of ISO/TC 261/JG 82 "Characterization of ceramic feedstock materials" and allocating JG 82 to the parent committees ISO/TC 261/WG 2 and ASTM F42.05. The scope is stated as where "The JG defines requirements for the characterization of ceramic feedstock materials such as fine ceramic powders, ceramic slurry, ceramic paste and ceramic feedstock materials with binder intended to be used in additive manufacturing, for example: properties with regard to morphology (shape, crystallinity, particle size distribution); physical properties (density, viscosity, compaction property, flowability); chemical composition (purity, contents of trace elements). Referring to existing ISO and ASTM standards for testing, the documents developed in this JG provide additional requirements, recommendations and information required for Additive Manufacturing.

2 New projects

Preliminary work item ISO/ASTM PWI 529XX "Additive manufacturing of ceramics—Feedstock materials—Characterization of ceramic slurry in vat photo-polymerization" assigned to ISO/TC 261/JG 82.

3 Change of deliverable

Change of deliverable from International Standard (IS) to Technical Report (TR) for ISO/ASTM 52917 "Additive manufacturing—Round Robin Testing—Guidance for conducting Round Robin studies". The tile will be changed to "Additive Manufacturing—Round Robin Testing—General Guidelines".

4 Status of joint groups

ISO/TC 261/JG 67 "Joint ISO/TC 261-ASTM F 42 Group, "Technical report for the design of functionally graded additive manufactured parts" has completed its objective and the

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work on ISO/ASTM TR 52912 (published in 2020) and ISO/ASTM 52950 (published in 2021) and has no further project allocated to the Joint Group, thereby changing the status of JG 67 to dormant and to re-activate JG 67 at a given time, when a new/relevant project fitting in the scope of JG 67 is required.

5 Updates to projects

Skipping of CD Stage and Ballot due to the maturity of the documents and proceeding to the ISO DIS- and ASTM F42-Main-Ballot for the following projects, registering them as project stage 30.99, CD approved for registration as DIS:

- ISO/ASTM 52902 additive manufacturing—test artifacts—geometric capability assessment of additive manufacturing systems
- ISO/ASTM 52908 additive manufacturing of metals—post-processing methods—quality assurance and post-processing of powder bed fusion metallic parts
- ISO/ASTM 52909 additive manufacturing of metals—finished part properties—orientation and location dependence of mechanical properties for powder bed fusion
- ISO/ASTM 52910 additive manufacturing—design—requirements, guidelines and recommendations
- ISO/ASTM 52928 additive manufacturing—Feedstock materials—powder life cycle management

Funding Not applicable.

Declarations

Conflict of interest Not applicable.

Ethical approval Not applicable.

Reference

1. International Organisation for Standardisation (2021) 17th plenary meeting of ISO/TC 261 "Additive Manufacturing" held on 21 May 2021, online. ISO/TC 261:N1003