Evolution of standardisation project on requirements for industrial additive manufacturing sites

03 November 2021, 01:00

Guido Heunen

The draft ISO/ASTM CD 52920 'Additive manufacturing - Qualification principles - Requirements for industrial additive manufacturing' has changed from status CD ('Committee Draft' - draft for enquiry, subject to members input) to DIS ('Draft International Standard' - draft for enquiry, subject to public input).

At present, the processes for additive manufacturing of parts need to be defined from scratch for each individual case due to the lack of standards.

The purpose of this draft is to outline the requirements, criteria, activities and sequences for quality-assured processes in additive manufacturing. This standard can be integrated in a quality management system, such as ISO 9001 and ISO 13485.

The document is divided into **three chapters**:

Qualification of the additive system operations

- Quality-relevant process steps within the manufacturing process
- Requirements for pre-processing (data preparation, feedstock management and system set-up)
- Requirements for in-processing (additive manufacturing process)
- Requirements for post-processing (default post-processing and end processing)
- Process qualification

Quality assurance

- Personnel requirements
- Non-conformities
- Continuous improvement process
- Documentation and tracing of the process steps (compliance with part specifications)
- Infrastructure of the part manufacturer
- Quality controls (batch approval and part approval)

Verification of the part requirements

- Manufacturing feasibility assessment
- Validation plan

- Execution of validation plan

Annex

- End processing
- Part testing
- Supplementary information (examples of series qualification, notes on potential process deviations across AM technologies and overview of standards per topic)

If you require any further information, please contact us!

Authors



Guido Heunen