

Additive manufacturing - Qualification principles -
Qualifying machine operators of laser metal powder
bed fusion machines and equipment used in aerospace
applications (ISO/ASTM 52942:2020)

EESTI STANDARDI EESSÕNA

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English Version

Additive manufacturing - Qualification principles -
Qualifying machine operators of laser metal powder bed
fusion machines and equipment used in aerospace
applications (ISO/ASTM 52942:2020)

Fabrication additive - Principes de qualification -
Qualification des opérateurs machine des machines à
fusion laser sur lit de poudre et équipements utilisés
dans les applications aéronautiques (ISO/ASTM
52942:2020)

Additive Fertigung - Grundsätze der Qualifizierung -
Standard Richtlinie zur Prüfung von Anlagenbedienern
für pulverbettbasierte Laserstrahlanlagen zur
additiven Fertigung für Luft- und
Raumfahrtanwendungen (ISO/ASTM 52942:2020)

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO/ASTM 52942:2020) has been prepared by Technical Committee ISO/TC 261 "Additive manufacturing" in collaboration with Technical Committee CEN/TC 438 "Additive Manufacturing" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO/ASTM 52942:2020 has been approved by CEN as EN ISO/ASTM 52942:2020 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by ISO/TC 261, *Additive manufacturing*, in cooperation with ASTM F 42, *Additive Manufacturing Technologies*, on the basis of a partnership agreement between ISO and ASTM International with the aim to create a common set of ISO/ASTM standards on additive manufacturing and in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 438, *Additive manufacturing*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement)..

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Additive manufacturing — Qualification principles — Qualifying machine operators of laser metal powder bed fusion machines and equipment used in aerospace applications

1 Scope

This document specifies requirements for the qualification of operators of laser metal powder bed fusion machines and equipment for additive manufacturing in aerospace applications.

This document is applicable if the operator qualification testing is required by contract or by application standards in the field of aerospace.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/ASTM 52900, *Additive manufacturing — General principles — Part 1: Fundamentals and vocabulary*

ISO/ASTM 52921, *Standard terminology for additive manufacturing — Coordinate systems and test methodologies*

ISO 18490, *Non-destructive testing — Evaluation of vision acuity of NDT personnel*

EN 4179, *Aerospace series — Qualification and approval of personnel for non-destructive testing*

NAS 410, *NAS CERTIFICATION & QUALIFICATION OF NONDESTRUCTIVE TEST PERSONNEL*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/ASTM 52900, ISO/ASTM 52921 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

examiner

person who has been appointed to verify conformance to the applicable standard

Note 1 to entry: In certain cases, an external independent examiner can be required.

[SOURCE: ISO 14732:2013, 3.12]

3.2

examining body

organization that has been appointed to verify conformance to the applicable standard

Note 1 to entry: In certain cases, an external independent examining body can be required.