

<b>STN</b>	<b>Aditívna výroba Výkonnosť a spoľahlivosť systému Preberacie skúšky strojov na tavenie kovových materiálov na báze práškovej vrstvy používaných v aplikáciách letectva a kozmonautiky (ISO/ASTM 52941: 2020)</b>	<b>STN EN ISO/ASTM 52941</b>  18 8509
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Additive manufacturing - System performance and reliability - Acceptance tests for laser metal powder-bed fusion machines for metallic materials for aerospace application (ISO/ASTM 52941:2020)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

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**Additive manufacturing - System performance and reliability - Acceptance tests for laser metal powder-bed fusion machines for metallic materials for aerospace application (ISO/ASTM 52941:2020)**

Fabrication additive - Performance et fiabilité du système - Essais de réception pour machines de fusion laser sur lit de poudre pour les matériaux métalliques pour l'application aérospatiale (ISO/ASTM 52941:2020)

Additive Fertigung - Systemleistung und Betriebssicherheit - Abnahmeprüfung von pulverbettbasierten Laserstrahlanlagen für metallische Werkstoffe für Luft- und Raumfahrtanwendungen (ISO/ASTM 52941:2020)

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**EN ISO/ASTM 52941:2020 (E)**

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## **European foreword**

This document (EN ISO/ASTM 52941:2020) 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of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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# INTERNATIONAL ISO/ASTM STANDARD 52941

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## **Additive manufacturing — System performance and reliability — Acceptance tests for laser metal powder-bed fusion machines for metallic materials for aerospace application**

*Fabrication additive — Performance et fiabilité du système — Essais de réception pour machines de fusion laser sur lit de poudre pour les matériaux métalliques pour l'application aérospatiale*



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**ISO/ASTM 52941:2020(E)****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](http://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.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Additive manufacturing — System performance and reliability — Acceptance tests for laser metal powder-bed fusion machines for metallic materials for aerospace application

## 1 Scope

This document specifies requirements and test methods for the qualification and re-qualification of laser beam machines for metal powder bed fusion additive manufacturing for aerospace applications.

It can also be used to verify machine features during periodic inspections or following maintenance and repair activities.

## 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 11146 (all parts), *Lasers and laser-related equipment — Test methods for laser beam widths, divergence angles and beam propagation ratios*

ISO 11554, *Optics and photonics — Lasers and laser-related equipment — Test methods for laser beam power, energy and temporal characteristics*

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*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**