FINAL
DRAFT

INTERNATIONAL
STANDARD

**ISO/ASTM
FDIS
52926-5**

ISO/TC **261**

Secretariat: **DIN**

Voting begins on:
2023-08-11

Voting terminates on:
2023-10-06

Additive manufacturing of metals — Qualification principles —

Part 5: Qualification of operators for DED-Arc

Fabrication additive de métaux — Principes de qualification —

Partie 5: Qualification des opérateurs pour DED-Arc

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/ASTM FDIS 52926-5:2023(E)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 261, Additive manufacturing, Joint Group JG 74, Personnel Qualifications in cooperation with ASTM Committee F42, 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, 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).

A list of all parts of the ISO/ASTM 52926 series can be found on the ISO website.

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Introduction

For many companies, additive manufacturing represents an alternative to more conventional manufacturing processes such as casting, forging and milling. The trend towards complex components, decentralised production and customer specific products allows an economically feasible use for more and more areas. This also applies to many series applications, which comprise completely different demands on the efficiency of the processes. In particular, components used in different fields (e.g., automotive industry, mechanical engineering, railway sector, aerospace, process and industrial plants, medical technology, etc.) are subject to high demands in terms of quality and safety. This creates a need for norms and standards that provide a transparent baseline for the production of components for a great variety of application areas. The manufacturing of products used for applications subjected to specific requirements, relies on that the products' compliance to these requirements can be assured. Additive manufacturing is no exception to this.. To this end, the production chain and environment should be designed in such a way that the process quality and the resulting product quality are always consistent and reproducible. To assure this consistency and reproducibility, it is of utmost importance to ensure that the involved workforce is adequately qualified for all stages in the production. ISO/ASTM 52926 series describes the activities and responsibilities of the operators in the field of the additive manufacturing technology. Its aim is to specify the qualification tests to be employed in the assessment of AM operators' skills when operating AM machines, especially in regulated industries, such as automotive industry, mechanical engineering, the railway sector, process and industrial plants or medical technology, consideration of the criteria defined within the framework of this ISO create a basis for fulfilling the requirements for specific products.

NOTE This document gives the constraints and requirements for an operator to be qualified for directed energy deposition - arc.