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Additive manufacturing of metals — Qualification principles —

Part 1: General qualification of operators

*Fabrication additive de métaux — Principes de qualification —
Partie 1: Qualification générale des opérateurs*

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Foreword

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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 document 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 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 group standard can be found on the ISO website.

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.

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.

Since this document is designed not to be cross-technology, the different processes are indicated in the relevant four parts of the standard.

This document offers a common approach for the qualification of professionals in AM. If the requirements of ISO/ASTM 52926 series are fulfilled, the scope of an audit can be greatly reduced.

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