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ISO/TC 261

Secretariat: DIN

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Additive ~~Manufacturing~~manufacturing of metals — Qualification principles — Part 2: Qualification of operators for PBF-LB

Fabrication additive des métaux — Principes de qualification — Partie 2: Qualification des opérateurs pour PBF-LB

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Contents

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 ~~documents~~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~~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 series 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.

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Introduction

For many companies, additive manufacturing represents an alternative to established manufacturing processes. 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 industry (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. The current lack of norms and standards means that processes for the production of components have to be defined from the scratch for each individual case, which causes a great effort and allows little transparency and thus little trust of other stakeholders in the processes.

If industrially used components are manufactured using additive manufacturing processes, it shall be proven that these meet the requirements. To this end, the production chain and environment shall be designed in such a way that the process quality and the resulting product quality are always consistent and reproducible. To assure the before mentioned consistency and reproducibility, is of utmost importance to assure that the involved workforce is adequately qualified for the several production stages.

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 ~~specifies~~gives the constraints and requirements for an operator to be qualified for ~~Powder Bed Fusion~~powder bed fusion – Laser ~~Beam~~beam (PBF-LB).

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