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Additive manufacturing of metals — Qualification principles — Qualification of coordination personnel

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Foreword

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Introduction

For many companies, additive manufacturing (AM) represents an interesting alternative to established manufacturing processes. The trend towards complex, customised or consolidated components, in addition to opportunities for reduced lead times and decentralised production allows an economically feasible use for a growing number of areas. This increasingly applies to many series applications, which add further demands on the efficiency and consistency of the processes. In particular, components used in regulated industries (e.g. automotive, rail, aerospace, process and industrial plants, medical) are subject to high demands in terms of quality and safety.

Where industrial components are produced using additive manufacturing processes, these shall satisfy the equivalent quality and safety requirements demanded of conventional processes. To this end, the production chain and environment are designed such that the process quality and resulting product quality are always consistent and reproducible. To achieve consistency and reproducibility, it is of utmost importance to ensure that the involved workforce is adequately qualified for all stages of production.

This document describes the activities and responsibilities of the personnel with coordination roles in the field of additive manufacturing for metallic parts.

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Additive manufacturing of metals — Qualification principles — Qualification of coordination personnel

1 Scope

This document specifies qualification requirements for coordination personnel in industrial manufacturing sites responsible for additive manufacturing of metal parts.

This document is applicable to all metallic processes that are described by ISO 17296-2. In this context, the skills, tasks and responsibilities for different levels of AM coordination personnel are typically adapted according to the applicable regulations, depending on the process.

This document is intended to provide guidance and requirements for the qualification of coordination personnel in general-industrial applications. Additional requirements are typically needed for specific industries or applications (e.g. aerospace, medical) or to meet regulatory requirements.

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 — Fundamentals and vocabulary*

ISO/ASTM 52920, *Additive manufacturing — Qualification principles — Quality requirements for industrial additive manufacturing sites*

ISO/ASTM/TS 52930, *Additive manufacturing — Qualification principles — Installation, operation and performance (IQ/OQ/PQ) of PBF-LB equipment*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
AM coordination personnel
AM coordinator
person or group of people performing defined AM coordination tasks, designated by the company to be responsible for a specific process

Note 1 to entry: The designation can be valid for one specific AM process or covering several process categories as specified in ISO/ASTM 52900 and illustrated in ISO 17296-2.

Note 2 to entry: Different personnel may be appointed by the manufacturer for different AM related tasks.

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