

ISO/ASTM 52943-2:2024-04 (E)

Additive manufacturing for aerospace - Process characteristics and performance - Part 2: Directed energy deposition using wire and arc

Contents

Page

Foreword..... iv

1 Scope..... 1

2 Normative references..... 1

3 Terms and definitions..... 1

4 Requirements for the feedstock..... 2

5 Qualification of the machine operator..... 3

6 Qualification of the DED machine..... 3

 6.1 Machine qualification..... 3

 6.2 Machine requalification..... 4

7 Build platform/substrate requirements..... 5

8 Environment requirements..... 5

 8.1 General..... 5

 8.2 Facility environment..... 5

 8.3 Process environment..... 5

9 Procedure qualification..... 6

 9.1 General..... 6

 9.2 APS..... 6

 9.3 Procedure requalification..... 8

10 Engineering documents..... 8

11 Production documents..... 9

12 Process monitoring..... 9

13 Product acceptance testing..... 9

14 Build documentation and traceability..... 10

15 Delivery documentation..... 10

Annex A (informative) Operator test certificate for additive manufacturing machines by material application with directed energy deposition..... 11

Bibliography..... 13