

DIN EN ISO/ASTM 52945:2024-04 (E)

Additive manufacturing for automotive - Qualification principles - Generic machine evaluation and specification of key performance indicators for PBF-LB/M processes (ISO/ASTM 52945:2023)

Contents	Page
European foreword.....	3
Foreword.....	4
Introduction.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Methodology for generic machine evaluation.....	7
4.1 Specification of use-cases.....	7
4.1.1 General.....	7
4.1.2 Use-case 1 – Benchmarking of machines.....	7
4.1.3 Use-case 2 – Generic evaluation in factory/site acceptance test.....	8
4.2 Specification of specimen and build job design.....	8
4.2.1 Specification of generic specimen and testing standards.....	8
4.2.2 Build job design.....	10
4.3 Machine performance characteristics.....	13
4.3.1 Input data and framework.....	13
4.3.2 Definition of the machine performance characteristics.....	14
5 Definition of overall equipment effectiveness (OEE) for AM-machines.....	16
5.1 General.....	16
5.2 Overview.....	16
5.3 Considered plant operating time for OEE monitoring.....	18
5.4 Availability rate.....	18
5.5 Performance rate.....	18
5.6 Quality rate.....	18
5.7 OEE calculation.....	19
Annex A (informative) Examples for Clauses 4 and 5.....	20
Bibliography.....	28