## ISO/ASTM TR 52912:2020 (E)

## Additive manufacturing — Design — Functionally graded additive manufacturing

## **Contents**

	For	eword	
	Intr	oduction	
1	Sco	ре	
2	Nor	Normative references	
_	1101		
3	Teri	Terms and definitions	
4	Abr	Abreviations	
5	Concept of Functionally Graded Additive Manufacturing (FGAM)		
	5.1	General	
	5.2	Homogeneous compositions — Single Material FGAM	
	5.3	Heterogeneous compositions — Multi-material FGAM	
6	Advances of functionally graded additive manufacturing		
	6.1	General	
	6.2	AM and FGAM process	
	6.3	Material extrusion	
	6.4	Powder bed fusion	
	6.5	Directed energy deposition	
	6.6	Sheet lamination	
7	Current limitations of FGAM		
	7.1	General	
	7.2	Material limitations	
	7.2.1	General	
	7.2.2	Defining the optimum material property distribution	
	7.2.3	Predicting the material properties of manufactured components	
	7.2.4	Material selection	
	7.2.5	Understanding differences and defining tolerances	
	7.3	Limitations of current additive manufacturing technologies	
	7.4	CAD Software limitations	
	7.4.1	General	
	7.4.2	Data exchange formats	
8	Potential applications of FGAM		
	8.1	General	
	8.2	Biomedical applications	
	8.3	Aerospace applications	
	8.4	Consumer markets	
9	Summary		

Page count: 27