

## 3D 打印技术的测试认证服务

# Testing and Certification Services for 3D Printing Technology

3D 打印是一种增材制造技术,现在广泛地应用在模具制造、工业设计、汽车、航空、医疗等专业领域,也越来越多地用于普通的家庭以满足大家的个性化需求,例如玩具、工艺品、食品等领域。3D 打印设备如其它工业机器一样存在安全方面的问题,例如机械危险、电气危险、激光辐射、热危险、爆炸风险等等。因此,设备的生产厂家需要借助专业检测机构来降低事故发生的几率。

3D printing technology is changing the scope of manufacturing: As an additive manufacturing technology, 3D printing is widely used not only in professional fields, such as in die manufacturing, industrial design, automobile, aviation and medical treatments, but also increasingly in ordinary households to cater to individual uses, such as creating toys, crafting and preparing food. Just like other machinery, 3D printing equipment has inherent safety risks, such as mechanical, thermal, explosive and electrical hazards and laser radiation. Equipment manufacturers thus require specialised support from testing institutions to minimise accident rates.



### 选择 TÜV 莱茵的理由 WHY YOU SHOULD CHOOSE TÜV RHEINLAND

TÜV 莱茵是一家有着悠久历史的认证公司,专业的技术团队和严谨的工作流程确保了检测工作的准确和高效。强大的全球 化的服务网络可以满足生产商对不同市场的认证检测需求。

TÜV Rheinland has a long-standing reputation as a certification company. We are committed to offering precise and efficient testing services through our professional technical team and the due diligence we perform in work procedures. With a global presence, we are able to satisfy different certification and testing needs, which vary between markets around the world.



#### 服务范畴 SERVICE SCOPE

签发机器指令、低电压指令、EMC 指令、WEEE、RoHS、REACH、能效等证书。国际认证可以覆盖北美、欧洲、俄罗斯、哈萨克斯坦、白俄罗斯、德国、日本、韩国、澳大利亚、新西兰、南非等区域。

TÜV Rheinland is authorised to issue certificates for various requirements, including the Machine Directive, Low Voltage Directive, EMC Directive, WEEE, RoHS, REACH and energy efficiency. The business scope of our international certification services covers North America, Europe, Russia, Kazakhstan, Belarus, Germany, Japan, Korea, Australia, New Zealand, South Africa and more.

	ME 挤压工艺	MJ 材料喷射工艺	BJ 粘接剂喷射工艺	PH 还原光聚合工艺	SL 层压工艺	PB 粉末床熔接工艺	DE 定向能量沉积工艺
普通家庭 (非固定)Household (mobile)							
Europe 欧洲	EN 60335-2-45	-	-	EN 61010-1 With Laser: Additional EN 60825-1	IEC 60950 With Laser: Additional EN 60825-1		
USA 美国	UL 499	-	-	UL 61010-1 With Laser: Additional IEC 60825-1	UL 60950-1 With Laser: Additional IEC 60825-1		
Canada 加拿大	CSA 22.2. No 60335-2-45	-	-	CSA 22.2 No UL 61010-1 With Laser: Additional CSA 22.2 No	CSA 22.2 No UL 61010-1 With Laser: Additional CSA 22.2 No		
事业单位、讲习班、学校、医院 (员工培训)Public institutions, workshops, schools, hospitals (personnel instruction)							
Europe 欧洲	EN 60335-2-45	EN 61010-1	EN 61010-1	EN 61010-1 With Laser: Additional EN 60825-1	EN 60950-1 With Laser: Additional EN 60825-1	EN 61010-1 With Laser: Additional EN 60825-1	
USA 美国	UL 499	UL 61010-1	UL 61010-1	UL 61010-1 With Laser: Additional IEC 60825-1	UL 60950-1 With Laser: Additional IEC 60825-1	UL 61010-1 With Laser: Additional IEC 60825-1	
Canada 加拿大	CSA 22.2. No 60335-2-45	CSA 22.2 No UL 61010-1	CSA 22.2 No UL 61010-1	CSA 22.2 No UL 61010-1 With Laser: Additional CSA 22.2 No	CSA 22.2 No UL 61010-1 With Laser: Additional CSA 22.2 No	CSA 22.2 No UL 61010-1 With Laser: Additional CSA 22.2 No	
工业 (固定)Industry (stationary)							
Europe 欧洲	EN 60519-1, -2	EN ISO 12100 EN 60204-1	EN ISO 12100-1 EN 60204-1	With Laser: EN ISO 11553-1 EN 60204-1 otherwise refer BJ	With Laser: EN ISO 11553-1 otherwise EN 1034-5 or EN 1010-1 EN 60204-1	EN ISO 11553-1 EN 60204-1	EN ISO 11553-1 EN 60204-1

### 为安全而莱,茵品质而生 Here for safety. Born for quality.

德国莱茵TÜV大中华区 TÜV Rheinland Greater China 服务热线 Hotline 4008831300/8009993668 +852 21921022 (中国香港 Hongkong) 888@tuv.com 关注我们的微信:

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