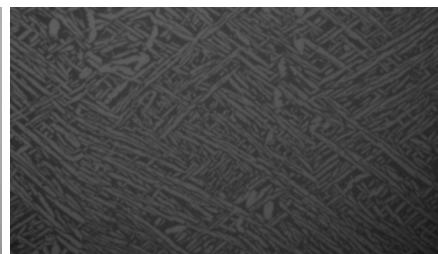
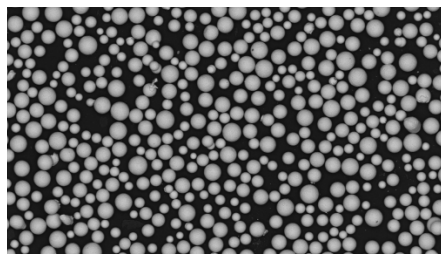


MT-TC11 Titanium alloy

[High strength, good ductility, excellent creep resistance and thermal stability]

Material Introduction

TC11 has good strength, ductility, creep resistance, and thermal stability at both room temperature and high temperature. It has excellent comprehensive performance and is widely used in the aerospace industry.



Applications

It is suitable for manufacturing aviation engine blades, compressor discs, rotor blades, drums and other components.



Engine impeller

Chemical Composition (wt.%)

Ti	Al	Mo	Zr	Si	Fe	C	N	H	O
Bal.	5.8-7.0	2.8-3.8	0.8-2.0	0.20-0.35	≤0.25	≤0.08	≤0.05	≤0.012	≤0.15

Physical Property

Granularity(μm)			Sphericity	Loose density (g/cm ³)	Tap density (g/cm ³)	Flowability (s/50g)
D10	D50	D90				
≥15	30-40	≤63	≥0.9	≥2.4	≥2.8	≤35

Parameters

Laser power(W)	Laser speed(mm/s)	Scanning spacing(mm)
240	1200	0.1



Mechanical Property

Heat-Treated			
Test Temperature	Tensile Strength/MPa	Yield Strength/MPa	Elongation/%
Room Temperature	≥ 1100	≥ 1050	≥ 12.0
500℃	≥ 740	≥ 550	≥ 16.0

Advanced Powder Metallurgy Technology



The powder metallurgy technology and equipment production line—
Electrode Induction Gas Atomization (AVI-EIGA)



The powder metallurgy technology and equipment production line—
Plasma Rotating Electrode Process (AVI-PREP)



Adapting Devices

10+ proprietary LPBF equipment systems supporting build sizes from 100 mm to 1500 mm.



MT170H



MT280



MT400M



MT450



MT650

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