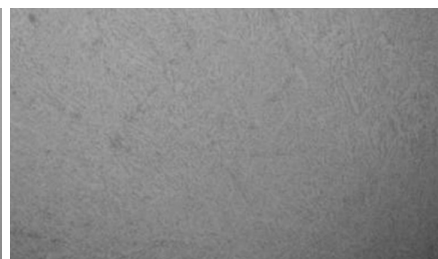
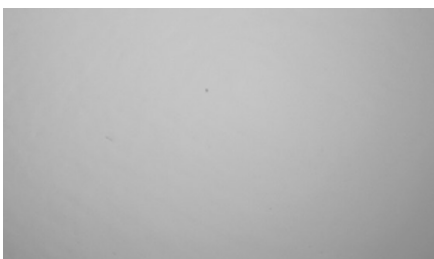
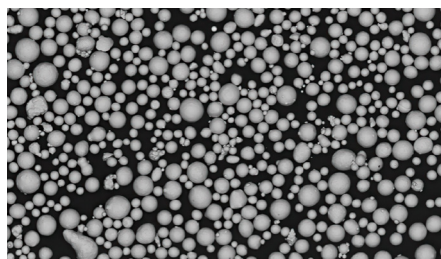


MT-BT20 Titanium alloy

[Excellent thermal stability and welding performance]

Material Introduction

BT20 is a near α type, short-term and high-temperature titanium alloy. It has moderate room temperature and high temperature strength, excellent thermal stability, and welding performance. Its long-term working temperature can reach 500 °C.



Applications

It is suitable for producing aircraft, engine parts, and welded load-bearing components that work for a long time below 500 °C.



Engine impeller

Chemical Composition (wt.%)

Ti	Al	Zr	Mo	V	Si	Fe	C	O	N	H
Bal.	5.5–7.1	1.5–2.5	0.5–2.0	0.8–2.5	≤0.15	≤0.25	≤0.08	≤0.12	≤0.03	≤0.015

Physical Property

Granularity(μm)			Sphericity	Loose density (g/cm³)	Tap density (g/cm³)	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)
220	1030	0.12



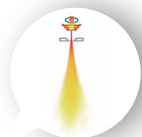
Mechanical Property

Heat-Treated			
Test Temperature	Tensile Strength/MPa	Yield Strength/MPa	Elongation/%
Room Temperature	≥ 1050	≥ 950	≥ 10.0
500℃	≥ 750	≥ 600	≥ 14.0
600℃	≥ 600	≥ 400	≥ 15.0

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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