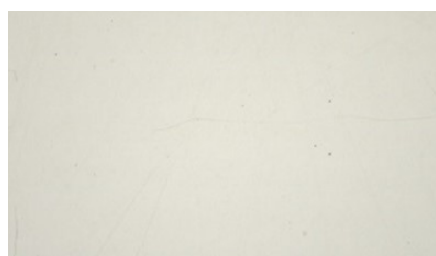
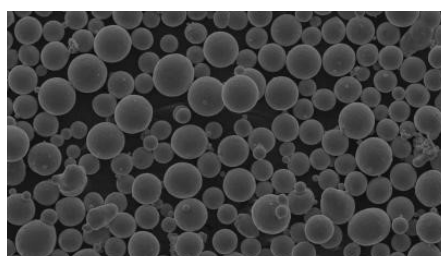


17-4PH Stainless steel

[Strong corrosion resistance]

Material Introduction

17-4PH is a low-carbon, high chromium precipitation hardening stainless steel. It enhances the hardness and strength of the alloy by adding strengthening elements such as Cu and Nb, which precipitate two-phase strengthening particles such as ϵ -Cu and NbC during the aging process. Therefore, it has good corrosion resistance.



Applications

It is used for structural components in the industrial field.

Chemical Composition (wt.%)

Fe	C	Si	Mn	Cr	Ni	Cu
Bal.	≤ 0.07	≤ 1.0	≤ 1.0	15.0-17.5	3.0-5.0	3.0-5.0
Nb	P	S	O	N	/	/
0.15-0.45	≤ 0.015	≤ 0.015	≤ 0.08	≤ 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	≤ 60	≥ 0.9	≥ 4.0	≥ 4.5	≤ 20

Parameters

Laser power(W)	Laser speed(mm/s)	Scanning spacing(mm)	Layer thickness (mm)
285	950	0.08	0.04



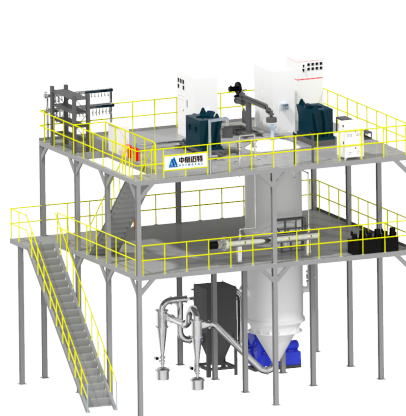
Mechanical Property

Condition	Tensile Strength/MPa	Yield Strength/MPa	Elongation/%
Heat-Treated	≥ 1100	≥ 1000	≥ 12.0

Advanced Powder Metallurgy Technology



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



The powder metallurgy technology and equipment production line—
Non-Vacuum Gas Atomization (AVI-GA)

Adapting Devices

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



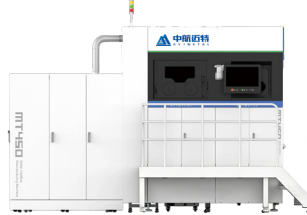
MT170H



MT280



MT400M



MT450



MT650

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