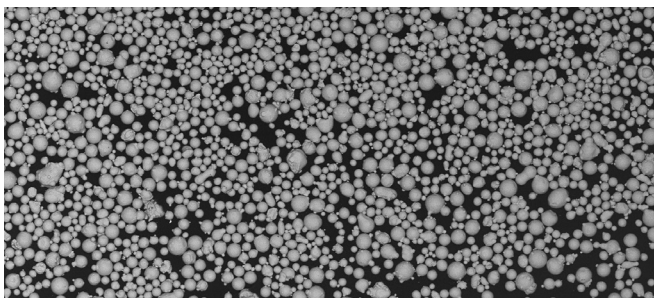
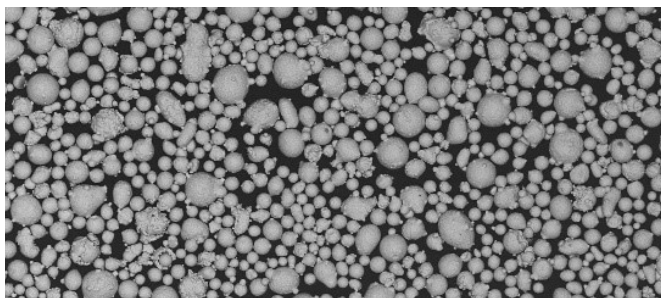


Haynes 230 Superalloy

【 High strength, oxidation resistance, thermal corrosion preventive, fatigue durability 】

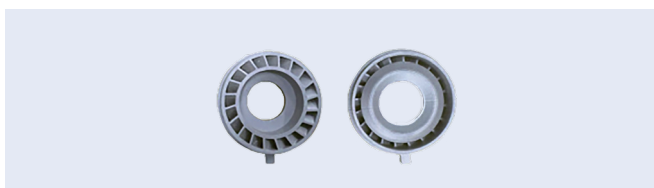
Material Introduction

Haynes 230 is a Ni based solid solution hardening deformation superalloy, with a using temperature of 700–1050 °C. It has high strength, stable structure, and excellent performance in resistance to cold and hot fatigue, heat corrosion, and oxidation.



Applications

It is suitable for manufacturing high-temperature structural components such as aviation engine combustion chambers.



Cyclone

Chemical Composition (wt.%)

C	Cr	Co	Mo	W	Fe	Ni	B	S
0.05–0.15	20.0–24.0	≤5.0	1.0–3.0	13.0–15.0	≤3.0	Bal.	≤0.015	≤0.015
Si	Mn	P	La	Al	Cu	Ti	O	N
0.25–0.75	0.30–1.0	≤0.03	0.005–0.05	0.2–0.5	≤0.5	≤0.1	≤0.02	≤0.02

Physical Property

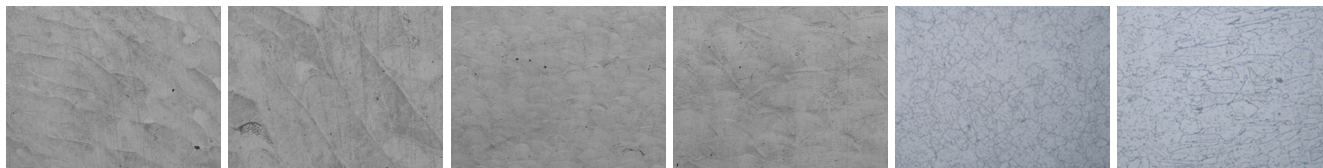
Granularity(μm)			Sphericity	Loose density (g/cm ³)	Tap density (g/cm ³)	Flowability (s/50g)
D10	D50	D90				
≥15	30–40	≤60	≥0.9	≥4.4	≥5.0	≤18

Parameters

Laser power(W)	Laser speed(mm/s)	Scanning spacing(mm)
200	930	0.08



Metallographic Structure



Sedimentary microstructure (XY-direction)

Sedimentary microstructure (Z-direction)

HIP+Solid solution microstructure
(left: XY direction; right: Z direction)

Mechanical Property

Heat-Treated			
Test Temperature	Tensile Strength/MPa	Yield Strength/MPa	Elongation/%
Room Temperature	≥ 800	≥ 400	≥ 30.0
900℃	≥ 230	≥ 180	≥ 30.0

Advanced Powder Metallurgy Technology

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



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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